

By this amendment, Applicant has deleted Figure 10. Figure 11 and Figure 12 have been renumbered so the figures are sequentially numbered in compliance with 37 CFR 1.84(u)(1). Applicant has further amended the specification to remove references to old Figure 10 and reflect the renumbering of Figure 11 and Figure 12. Reconsideration and withdrawal of this objection is respectfully requested

### **Rejections Under 35 U.S.C. §112**

The Examiner finds that there is insufficient antecedent basis for the limitation “the channel” in claim 30. Claim 30 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement.

The Examiner found that the specification fails to support the feature that the channels are formed between the first portion of the support member and the second portion of the support member. The Examiner found that “first major surface 98” of the “first portion 92” contained the channels and that “first major surface 98” is described in the context of figure 3 as the “upper surface” and thus the side of portion 92 facing opposite the membrane.

By this Amendment, Applicant has amended Claim 30 to recite “a channel” to properly introduce the element. Applicant respectfully disagrees that there is insufficient antecedent basis in the specification for the claimed limitation of a channel disposed between the first portion and the second portion. Applicant would like to draw the Examiners attention to Paragraph [0047] of the present application. The specification clearly discloses that the that the variable “used in conjunction with . . . the use of channel(s) (e.g. in second portion 94 and/or in first portion 92)” (emphasis added). Applicant respectfully submits that a channel that is “in” both the first and second portions 92, 94 has to be positioned “between” the first and second portions. Accordingly, reconsideration and withdrawal of this rejection is respectfully requested.

### **Rejections Under 35 U.S.C. §102**

Claims 1-8, 14-25, 27, 31 and 32 are rejected under 35 U.S.C. 102(a) or 102(e) as being anticipated by Shiepe et al (U.S. Patent 7,166,382 and WO 02/27846, hereinafter Shiepe).

As the Examiner stated in office action the applied reference by Shiepe has a common assignee with the present application. On December 28, 2007, Applicant filed a petition for approval of a delayed claim to priority to Shiepe. In light of the claimed priority to Shiepe, Applicant respectfully submits that the 35 U.S.C. 102(a) and/or 35 U.S.C. 102(e) rejection with respect to Shiepe is moot. Accordingly, reconsideration and withdrawal of this rejection are respectfully submitted.

Claims 1, 7, 8, 9, 15-19 and 31 are rejected under 35 U.S.C. 102(b) as being anticipated by Rosenmayer (German Patent 19840517 with reference to its English equivalent, US Patent 6,605,381, hereinafter Rosenmayer).

The Examiner found that Rosenmayer anticipates the invention as claimed. Specifically, the Examiner found that Rosenmayer teaches an electrochemical cell including first and second electrodes on opposite sides of a membrane, and a sintered porous support having a first porosity on the first side facing the membrane and a second, different porosity on the second side facing opposite from the membrane.

Applicant traverses this rejection for the following reasons.

Applicant respectfully submits that “[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, *in a single prior art reference.*” *Verdegaal Bros. V. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987) (emphasis added). Moreover, “[t]he identical invention must be shown in as complete detail as is contained in the \*\*\* claim.” *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). Furthermore, the single source must disclose all of the claimed elements “arranged as in the claim.” Structural Rubber Prods. Co. v. Park Rubber Co., 749 F.2d 707, 716, 223 U.S.P.Q. 1264, 1271 (Fed. Cir. 1984). Missing elements may not be

supplied by the knowledge of one skilled in the art or the disclosure of another reference. Titanium Metals Corp. v. Banner, 778 F.2d 775, 780, 227 U.S.P.Q. 773, 777 (Fed. Cir. 1985).

Applicant respectfully submits that Claims 1, 7, 8, 9, 15-19 and 31 are not anticipated by Rosenmayer. Rosenmayer discloses a fuel cell having a gas diffusion layer arranged between a membrane and a current collector plate. [Rosenmayer, col 3, lines 40 – 60]. In the office action, the Examiner states that Rosenmayer discloses a gas diffusion layer having a porosity gradient. [paper 20070710, page 1, paragraph 1]. Applicant respectfully disagrees. Rosenmayer discloses a gas diffusion structure (3,4) that has a “gradient in terms of gas permeability.” [Rosenmayer, col 3, lines 51-52]. Applicant respectfully submits that a gas permeability gradient is different from the claimed limitation of a first and second porosity.

Permeability is defined as the capability of being penetrated or permeated especially having pores or openings that permit liquids or gases to pass through. [Merriam Webster Online, *Permeable*, <http://www.webster.com/dictionary/permeable> (December 31, 2007)]. Porosity, in contrast is defined as the ratio of the volume of interstices of a material to the volume of its mass. [Merriam Webster Online, *Porosity*, <http://www.webster.com/dictionary/porosity> (December 31, 2007)]. Applicant respectfully submits that the ratio of volume to mass is different than the ability of a gas to penetrate.

Rosenmayer is directed to a fuel cell that uses two gases (e.g. hydrogen and air) to generate electricity. Thus gas permeability is important to allow the functioning of the fuel cell system. Any water in the system disclosed by Rosenmayer is in the form of water vapor. [Rosenmayer, col 4, lines 50-61]. Further, Rosenmayer indicates that water deposits in the pores are a problem. [Rosenmayer, col 4, lines 39 - 43]. In contrast, is directed to an electrolysis cell stack having a porous support in fluid communication with the membrane. As discussed in at least Paragraph [0043] of the present Application, an electrolysis cell stack requires the flow of water through the porous support for it to function. Accordingly, Applicant respectfully submits that Rosenmayer does not disclose a

porous support having a first portion with a first porosity and a second portion with a second porosity. Reconsideration and withdrawal of this rejection is respectfully requested.

Dependent Claims 7, 8, 9, 15-19 and 31 which depend directly or indirectly from independent Claim 1 also inherit all of the limitations of the respective parent claim. Accordingly, Applicant respectfully submits that for at least the reasons stated above with respect to independent Claim 1, dependent Claims 7-9, 15-19 and 31 are not anticipated by Rosenmayer. Reconsideration and withdrawal of this rejection is respectfully requested.

Accordingly, Applicant submits that Rosenmayer does not disclose all of the claimed elements arranged as in the claim, and absent anticipatory disclosure in Rosenmayer of each and every element of the claimed invention arranged as in the claim, Rosenmayer cannot be anticipatory.

Claims 1-7, 13-25 and 27, 15-19 and 31 are rejected under 35 U.S.C. 102(b) as being anticipated by Carlson et al (US Patent 5,372,689, hereinafter Carlson) with evidence from Shiepe.

In the office action, the Examiner find that Carlson teaches a water electrolyzer comprising an anode, a cathode and an ion exchange membrane separating the two electrodes, further teaching a porous support member having multiple-pore sizes. [paper 20070710, Paragraph 12]. The Examiner further finds that at least some portion of the porous support member of Carlson, the second portion would have has a larger pore size than the first portion, such that the porosity of the second portion would have been more porous. Applicant respectfully disagrees that independent Claim 1 is anticipated by Carlson.

Carlson does not teach a porous support member comprising a first portion and second portion of differing porosities. Contrary to the Office Action, Carlson et al. focus on pore size, not porosity. As discussed above, porosity is the ratio of interstices of material to the volume of mass. Disclosure of multiple-pore sizes is not a disclosure of

different portions with different porosities. Carlson et al. are interested in dual-directional flow of oxygen or hydrogen and water. They discuss porosity in relation to the whole porous sheet “a thin sheet having multiple pore sizes...”. (Col. 4, lines 1 – 30).

To further clarify independent Claim 1, Applicant has included the limitation that the first portion and second portion are adjacent. Even though Applicant disagrees with the Examiners assertion that Carlson would have to have a first and second portions due to differing pore sizes, Applicant respectfully submits that Carlson does not teach, disclose or suggest a first and second portion that are adjacent to each other.

Applicant further submits, to the extent that the Examiner relied upon Shiepe, Applicant respectfully submits that this argument is moot in light of the claim to priority to Shiepe by the Applicant. Accordingly, reconsideration and withdrawal of this rejection is respectfully requested.

Dependent Claims 2-7, 13-25 and 27, 15-19 and 31 which depend directly or indirectly from independent Claim 1 also inherit all of the limitations of the respective parent claim. Accordingly, Applicant respectfully submits that for at least the reasons stated above with respect to independent Claim 1, dependent Claims 2-7, 13-25 and 27, 15-19 and 31 are not anticipated by Carlson. Reconsideration and withdrawal of this rejection is respectfully requested.

Accordingly, Applicant submits that Carlson does not disclose all of the claimed elements arranged as in the claim, and absent anticipatory disclosure in Carlson of each and every element of the claimed invention arranged as in the claim, Carlson cannot be anticipatory.

Claims 1-6, 8, 15, 17-18 and 31 are rejected under 35 U.S.C. 102(e) as being anticipated by Gorman et al (U.S. Patent Publication 2002/0086195, hereinafter Gorman). Gorman is directed to a proton exchange membrane (PEM) fuel cell wherein catalyst layers are disposed on both sides of a proton exchange membrane. Bilayer porous plates are positioned adjacent the catalyst layers. Water transport plates (WTP) are positioned adjacent the porous plates that “provide a full planar surface to the bilayer plate and the

WTP acts as a water source that may be augmented by inlet stream water saturation up to about 100% relative humidity.” [Gorman, Paragraph[0011]].

In the office action, the Examiner admits that Gorman fails to teach a sintered porous plate as taught and claimed in the present application but states that “sintered” is not a structural limitation and is therefore given no patentable weight. Applicant respectfully disagrees. A “sintered” porous support is a type of support and not merely a process limitation. A sintered support is one that provides substantially higher and more uniform levels of support for the membrane when compared with other types of supports, such as woven and un-woven screens or fiberous felts for example. [Present Application, Paragraph [0036]]. This provides advantages in allowing the elimination of other components typically found in cell stack, such as screenpacks for example. [Present Application, Paragraph [0049]].

Applicant further reiterates its previous assertion that a sinter is a type and provides as evidence an exemplary explanation of “sintered.” In at least one technical field (e.g., oilfield), sintered is described in relation to a filter as “pertaining to a type of filter medium...”. [Schlumberger, *Sintered*, <http://www.glossary.oilfield.slb.com/Display.cfm?Term=sintered> (December 31, 2007)]. As the Applicant has previously explained, “sintered” describes the type of porous support member; and the term “sintered” is not merely a process limitation in an article claim. Accordingly, the element of the support member being a sintered support member has not been given its proper patentable weight.

Dependent Claims 2--6, 8, 15, 17-18 and 31 which depend directly or indirectly from independent Claim 1 also inherit all of the limitations of the respective parent claim. Accordingly, Applicant respectfully submits that for at least the reasons stated above with respect to independent Claim 1, dependent Claims 2-7, 13-25 and 27, 15-19 and 31 are not anticipated by Gorman. Reconsideration and withdrawal of this rejection is respectfully requested.

Accordingly, Applicant submits that Gorman does not disclose all of the claimed elements arranged as in the claim, and absent anticipatory disclosure in Gorman of each

and every element of the claimed invention arranged as in the claim, Gorman cannot be anticipatory.

Claim 20 is rejected under 35 U.S.C. 102(e) as being anticipated by Anderson et al. (U.S. Patent Publication 2003/0230495, hereinafter Anderson). In light of Applicants claim to priority to Shiepe, Applicant respectfully submits that Anderson is not a proper prior art reference under 35 U.S.C. 102. Accordingly, Applicant submits that this rejection is now moot. Reconsideration and withdrawal of this rejection is respectfully requested.

In view of the amendment and foregoing remarks, Applicant submits that the cited references do not disclose each and every element of the claimed invention arranged as claimed and therefore cannot be anticipatory. Accordingly, Applicant respectfully submits that the Examiner's rejections under 35 U.S.C. §102(b) and 35 U.S.C. §102(e) have been traversed, and requests that the Examiner reconsider and withdraw of these rejections.

### **Rejections Under 35 U.S.C. §103(a)**

Claims 9 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Shiepe in view of Rosenmayer.

In the office action, the Examiner acknowledges that Shiepe does not specifically disclose the claimed single layer porous support member with porosity gradient and looks to Rosenmayer to cure this deficiency. Applicant respectfully submits that in light of Applicant's claim to priority to Shiepe, that Claim 9 is not obvious in light of Rosenmayer. Further, Claim 9 depends directly from independent Claim 1 and incorporates all of the limitations of the parent claim. Therefore, Applicant respectfully submits for at least the reasons discussed above with respect to Rosenmayer and independent Claim 1 that Rosenmayer does not disclose, teach or suggest the claimed

limitations. Accordingly, reconsideration and withdrawal of this rejection is respectfully requested.

Claims 9 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Gorman in view of Rosenmayer. The Examiner acknowledges that Gorman does not specifically disclose the claimed single layer porous support member with porosity gradient and looks to Rosenmayer to cure this deficiency.

Applicant traverses these rejections for the following reasons.

Applicant respectfully submits that the obviousness rejection based on the References is improper as the References fail to teach or suggest each and every element of the instant invention in such a manner as to perform as the claimed invention performs. For an obviousness rejection to be proper, the Examiner must meet the burden of establishing a *prima facie* case of obviousness. *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988). The Examiner must meet the burden of establishing that all elements of the invention are taught or suggested in the prior art. MPEP §2143.03.

Applicant respectfully disagrees that Claim 9 is obvious in light of Gorman in view of Rosenmayer. In order for a claim to be obvious, all the elements of the invention must be taught or suggested by the cited references. As discussed above, Gorman fails to disclose a sintered porous support. Applicant respectfully submits that Rosenmayer fails to overcome this deficiency. Applicant further reasserts its argument that Rosenmayer also fails to disclose, teach or suggest a first and second porosity, but rather teaches of a gas permeability gradient. For the reasons discussed above, Applicant respectfully submits that gas permeability gradient and a porosity gradient are different. Accordingly, reconsideration and withdrawal of this rejection is respectfully requested.

Claims 10-12, 26 and 30 are rejected under 35 U.S.C. §103(a) as being unpatentable over Shiepe in view of Wilkinson et al. (U.S. Patent 5,252,410, hereinafter Wilkinson). The Examiner acknowledges that Shiepe does not teach forming flow field channels in the support member and looks to Wilkinson to cure this deficiency.

Applicant respectfully submits that in light of Applicant's claim to priority to Shiepe, that Claims 10-12, 26 and 30 are not obvious in light of Wilkinson. Accordingly, reconsideration and withdrawal of this rejection is respectfully requested.

Claims 10-12 and 30 are rejected under 35 U.S.C. §103(a) as being unpatentable over Rosenmayer in view of Wilkinson. The Examiner acknowledges that Rosenmayer does not teach forming flow patterns in the support member and looks to Wilkinson to cure this deficiency.

Applicant reasserts the argument discussed above that Rosenmayer fails to disclose, teach or suggest a first and second porosity, but rather teaches of a gas permeability gradient. For at least this reason, Applicant respectfully submits that Claims 10-12 and 30 are not obvious in light of Rosenmayer.

Applicant further submits that Wilkinson does not overcome these deficiencies. In the office action, the Examiner states that Wilkinson teaches channels in a porous support member. [paper 20070710, Paragraph (19)]. Applicant respectfully disagrees. Wilkinson is directed to a fuel cell having a porous carbon sheet with a thin layer of catalyst that is positioned between the membrane and a separator plate. The channels are formed in the separator plate. [Wilkinson, col. 8, lin 40-45]. Applicant respectfully submits that the separator plate is not porous. If the separator plate were porous, it would fail to provide its intended function in separating one electrochemical cell from another. Further, Applicant respectfully submits that if Rosenmayer and Wilkinson combined, the result would be a gas diffusion layer that interacts with channels in the separator plate. Since the resulting structure of Rosenmayer and Wilkinson does not teach, disclose or suggest all the claimed limitations or perform in the same manner as Claims 10-12 and 30, Applicant respectfully submits that Claims 10-12 and 30 are not obvious in light of Rosenmayer in view of Wilkinson. Accordingly, reconsideration and withdrawal of this rejection is requested.

Claims 10-12 and 26 are rejected under 35 U.S.C. §103(a) as being unpatentable over Carson in view of Wilkinson. The Examiner acknowledges that Carson does not teach forming flow field channels in the support member and looks to Wilkinson to cure this deficiency. Applicant respectfully disagrees.

As discussed above, Carson fails to teach, disclose or suggest a sintered porous support having a first and second portion having differing porosities. Applicant respectfully submits that Wilkinson fails to cure this deficiency since Wilkinson discloses a carbon fiber paper and a non-porous separator plate. Further, as discussed above, Wilkinson fails to disclose channels in a sintered porous support. Since the resulting structure of Carson and Wilkinson does not teach, disclose or suggest all the claimed limitations or perform in the same manner as Claims 10-12 and 26, Applicant respectfully submits that Claims 10-12 and 30 are not obvious in light of Gorman in view of Wilkinson. Accordingly, reconsideration and withdrawal of this rejection is requested.

Claims 10-12 and 30 are rejected under 35 U.S.C. §103(a) as being unpatentable over Gorman in view of Wilkinson. The Examiner acknowledges that Gorman does not teach forming flow field channels in the support member and looks to Wilkinson to cure this deficiency. Applicant respectfully disagrees.

As discussed above, Gorman fails to teach, disclose or suggest a sintered porous support. Applicant respectfully submits that Wilkinson fails to cure this deficiency since Wilkinson discloses a carbon fiber paper and a non-porous separator plate. Further, as discussed above, Wilkinson fails to disclose channels in a sintered porous support. Since the resulting structure of Gorman and Wilkinson does not teach, disclose or suggest all the claimed limitations or perform in the same manner as Claims 10-12 and 30, Applicant respectfully submits that Claims 10-12 and 30 are not obvious in light of Gorman in view of Wilkinson. Accordingly, reconsideration and withdrawal of this rejection is requested.

Claim 13 is rejected under 35 U.S.C. §103(a) as being unpatentable over Shiepe in view of Carlson. In light of Applicant's claim to priority to Shiepe, Applicant submits

that Shiepe is not a valid prior art reference under 35 U.S.C. §103. Accordingly, Applicant submits that this rejection is moot. Reconsideration and withdrawal are respectfully requested.

Claim 13 is rejected under 35 U.S.C. §103(a) as being unpatentable over Rosenmayer in view of Carlson. The Examiner acknowledges that Rosenmayer does not teach forming regions on the porous support member having differing porosities and looks to Carlson to cure this deficiency. Applicant respectfully disagrees.

As discussed above, Applicant submits that Rosenmayer fails to disclose, teach or suggest a first and second porosity, but rather teaches of a gas permeability gradient. Applicant submits that Carson fails to cure this deficiency, and as discussed above, Carson fails to teach, disclose or suggest a sintered porous support having a first and second portion having differing porosities. Nor does either reference teach, disclose, or suggest that a second portion has regions of higher and lower porosity as claimed in Claim 13. Since the resulting structure of Rosenmayer and Carson does not teach, disclose or suggest all the claimed limitations or perform in the same manner as Claim 13, Applicant respectfully submits that Claim 13 is not obvious in light of Rosenmayer in view of Carson. Accordingly, reconsideration and withdrawal of this rejection is requested.

Claim 13 is rejected under 35 U.S.C. §103(a) as being unpatentable over Gorman in view of Carlson. The Examiner acknowledges that Gorman does not teach forming regions on the porous support member having differing porosities and looks to Carlson to cure this deficiency. Applicant respectfully disagrees.

As discussed above, Gorman fails to teach, disclose or suggest a sintered porous support. Applicant respectfully submits that Carson fails to cure this deficiency since Carson fails to teach, disclose or suggest a sintered porous support having a first and second portion having differing porosities. Nor does either reference teach, disclose, or suggest that a second portion has regions of higher and lower porosity as claimed in

Claim 13. Since the resulting structure of Gorman and Carson does not teach, disclose or suggest all the claimed limitations or perform in the same manner as Claim 13, Applicant respectfully submits that Claim 13 is not obvious in light of Gorman in view of Carson. Accordingly, reconsideration and withdrawal of this rejection is requested.

Claims 14, 20-25, 27 and 32 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Rosenmayer in view of Shiepe (U.S. Patent 6,365,032, hereinafter the “‘032 patent”). The Examiner acknowledges that Rosenmayer does not explicitly teach the claimed pressure pad and looks to the ‘032 patent to cure this deficiency. Applicant respectfully disagrees.

As discussed above, Applicant submits that Rosenmayer fails to disclose, teach or suggest a first and second porosity, but rather teaches of a gas permeability gradient. Applicant submits that the ‘032 patent fails to cure this deficiency. For at least this reason, Applicant submits that Claims 14, 20-25, 27 and 32 are not obvious in light of Rosenmayer in view of the ‘032 patent. The ‘032 patent discloses an electrochemical cell having a screen assembly to support a membrane. ‘032 patent does not disclose a sintered porous support, nor does the ‘032 patent disclose a support having a first and second portion having different porosities. Since the resulting structure of Rosenmayer and the ‘032 patent do not teach, disclose or suggest all the claimed limitations of Claims 14, 20-25, 27 and 32, Applicant respectfully submits that Claims 14, 20-25, 27 and 32 are not obvious in light of Rosenmayer in view of the ‘032 patent. Reconsideration and withdrawal of this rejection is respectfully requested.

Claim 26 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Rosenmayer in view of Shiepe (U.S. Patent 6,365,032) and further in view of Wilkinson. The Examiner acknowledges that a combination of Rosenmayer and the ‘032 patent do not explicitly teach the claimed channel and looks to Wilkinson to cure this deficiency. Applicant respectfully disagrees.

As discussed above, Applicant submits that Rosenmayer fails to disclose, teach or suggest a first and second porosity, but rather teaches of a gas permeability gradient. Further, as discussed above, Wilkinson does not teach the forming of channels in a sintered porous support member but rather in a non-porous separator plate. Applicant respectfully submits that Wilkinson fails to overcome the deficiencies of Rosenmayer and the '032 patent. Since the resulting structure of Rosenmayer, the '032 patent and Wilkinson do not teach, disclose or suggest all the claimed limitations of Claim 26, Applicant respectfully submits that Claim 26 is not obvious in light of Rosenmayer in view of the '032 patent in further view of Wilkinson. Reconsideration and withdrawal of this rejection is respectfully requested.

Claims 14, 20-25, 27 and 32 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Gorman in view of Shiepe (U.S. Patent 6,365,032). The Examiner acknowledges that Gorman does not explicitly teach the claimed pressure pad and looks to the '032 patent to cure this deficiency. Applicant respectfully disagrees.

As discussed above, Gorman fails to teach, disclose or suggest a sintered porous support. Applicant respectfully submits that the '032 patent fails to cure this deficiency since the '032 patent discloses a screen assembly support and not a sintered porous support having a first and second portion having different porosities. Since the resulting structure of Gorman and the '032 patent do not teach, disclose or suggest all the claimed limitations of Claims 14, 20-25, 27 and 32, Applicant respectfully submits that Claims 14, 20-25, 27 and 32 are not obvious in light of Gorman in view of the '032 patent. Reconsideration and withdrawal of this rejection is respectfully requested.

Claim 26 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Gorman in view of Shiepe (U.S. Patent 6,365,032) and further in view of Wilkinson. The Examiner acknowledges that a combination of Gorman and the '032 patent do not explicitly teach the claimed channel and looks to Wilkinson to cure this deficiency. Applicant respectfully disagrees.

As discussed above, Applicant submits that Gorman fails to disclose, teach or suggest a sintered porous support. Further, as discussed above, Wilkinson does not teach the forming of channels in a sintered porous support member but rather in a non-porous separator plate. Applicant respectfully submits that Wilkinson fails to overcome the deficiencies of Gorman and the '032 patent. Since the resulting structure of Gorman, the '032 patent and Wilkinson do not teach, disclose or suggest all the claimed limitations of Claim 26, Applicant respectfully submits that Claim 26 is not obvious in light of Gorman in view of the '032 patent in further view of Wilkinson. Reconsideration and withdrawal of this rejection is respectfully requested.

In view of the foregoing, Applicant submits that the References fail to teach or suggest each and every element of the claimed invention and are therefore wholly inadequate in their teaching of the claimed invention as a whole, fail to motivate one skilled in the art to do what the patent Applicant has done, fail to recognize a problem recognized and solved only by the present invention, fail to offer any reasonable expectation of success in combining the References to perform as the claimed invention performs, fail to teach a modification to prior art that does not render the prior art being modified unsatisfactory for its intended purpose, and discloses a substantially different invention from the claimed invention, and therefore cannot properly be used to establish a *prima facie* case of obviousness. Accordingly, Applicant respectfully requests reconsideration and withdrawal of all rejections under 35 U.S.C. §103(a), which Applicant considers to be traversed.

In light of the foregoing, Applicant respectfully submits that the Examiner's rejections under 35 U.S.C. §112, 35 U.S.C. §102 and 35 U.S.C. §103, have been traversed, and respectfully requests that the Examiner reconsider and withdraw these rejections.

If a communication with Applicant's Attorneys would assist in advancing this case to allowance, the Examiner is cordially invited to contact the undersigned so that any such issues may be promptly resolved.

The Commissioner is hereby authorized to charge any additional fees that may be required for this amendment, or credit any overpayment, to Deposit Account No. 06-1130.

In the event that an extension of time is required, or may be required in addition to that requested in a petition for extension of time, the Commissioner is requested to grant a petition for that extension of time that is required to make this response timely and is hereby authorized to charge any fee for such an extension of time or credit any overpayment for an extension of time to the above-identified Deposit Account.

Respectfully submitted,

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